DevOps
for the
Rest of Us
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Government Deserves Better Software

stiinc.com
About STSI

Solution Technology Systems, Inc. (STSI) delivers on digital government strategies to help US Federal Government agencies better execute their mission through technology.

DevOps Adoption

- **DevOps Implementation**: roll out the technical integrations necessary to support automation
- **DevOps Support**: provide the ongoing central capability supporting development teams

Open Data APIs

- **API Solutions**: make data available to developers in machine-accessible formats such as JSON
- **Citizen Portals**: provide user-friendly access to information, datasets, and related metadata

Application Modernization

- **Rapid Prototyping**: leverage open source frameworks to rapidly build applications in collaboration with users
- **Application Roadmaps**: ensure that systems continue to support the mission
- **Obsolescence Mitigation**: adapt to industry support timelines and manage software risk
I HAVE NO IDEA
WHAT I'M DOING
THE DARK AGES
A world without automation
Just get your environment set up…
... and now you’re ready to deploy!
(Don’t forget to monitor production)
KEEP CALM
IT WORKS ON MY MACHINE
The Monster
"DEVOPS"

YOU KEEP USING THAT WORD, I DO NOT THINK IT MEANS WHAT YOU THINK IT MEANS
What is a DevOps?

Our definition: A collection of practices bringing greater automation and collaboration across IT application development and operations.
Enough Talk, it’s Demo Time!

- Set up your environment
- Check out a feature branch w/ Git
- Write automated acceptance test
- Push code to continuous integration server
  - Watch the test FAIL
- Script a database change
- Add a dependency
- Make code changes
  - Watch tests PASS
- Push the branch to GitHub
  - More CI action
- It’s alive! (in staging)
How This App Was DevOps'd

Source Repo
GitHub

Application

- circle.yml
- Dockerfile
- Gemfile
- bower.json
- setup.py
- /db/migrate
- /gruve/tests/
- /spec

CI Server
circleCI

- Setup server shell
- Install dependencies
- Setup database
- Run tests
- Deploy Docker image

Chat
Slack

Docker Image Repo
Docker Hub

Production Environment
AWS

- Elastic Beanstalk
- S3

Continuous Monitoring
New Relic

Developer
DevOps Saves!

- **Start quickly**
  Developers get up and running

- **Environments look alike**
  Application is built from code (dependencies, database, etc.)
  Infrastructure is built from code (IaC, containers, etc.)

- **Refactor without fear**
  Automated tests act as a safety net

- **Deploy (& recover) easily**
  Streamlined, but safeguarded

- **Automate production ops**
  Monitor, scale, cache

now with 30% more Buzzwords!
What is Right for Me?

“I don’t know where to start”
- Focus on the pain
- Start small, continue small

“We’re under pressure to ship, not work on this stuff”
- The right thing to do is often the easy thing to do
  (it takes as much time to write a manual script as an automated one)
- The benefits are often broader than you think
Final Thought

CAR 1
✓ Experimental engine w/ 2x horsepower
✓ No brakes
✓ No seatbelt

CAR 2
✓ Mediocre engine
✓ Good brakes
✓ Great seatbelt

Who wins?
Thanks!

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